

REMARKS

While applicant believes the specification was sufficiently clear as to colorant, in view of the fact that claim 25 is a dependent claim, it has been changed to eliminate the Section 112 rejection.

Claims 1-10, 16-22 and 24-36 were rejected under 35 U.S.C. § 103(a) over GB 1424517 in view of GB 1108261, and claims 1-10 and 30-36 were rejected under 35 U.S.C. § 103(a) over Johnson. Both rejections are respectfully traversed.

The previous response established that GB 1424517 did not anticipate or render the claimed invention obvious standing on its own. The Examiner has therefore relied upon the second British patent (GB '261) in this rejection with respect to the R moiety. The '261 patent discloses a huge number of source possibilities for R on page 2 thereof, including: polyester chains; polymers of alkylene oxides; high molecular weight epoxy resins; polyamide resins; polymerized drying oil; phenol-formaldehyde, urea-formaldehyde and melamine-formaldehyde resins; polyurethanes; esters of acrylic, methacrylic and ethacrylic acids; vinyl esters; vinyl alkyl esters; polymers of unsaturated hydrocarbons; styrene polymers; alkylene oxide polymers; polymers of vinyl halides and vinyl esters, (meth)acrylic polymers and amides thereof; polyethylene and polypropylene glycol polymers; hydroxylated polymers; and polymers of glycol (meth)acrylates. In order to arrive at the rejected claims, one must first make a selection from these categories and then must also make a further selection such that the R group contains 50 to 200 carbon atoms rather than 1-49 or more than 200.

It will be appreciated from the foregoing that the combination of the two British patents constitutes a shotgun disclosure with respect to the claimed invention. There is nothing in either of these references which points one skill in the art toward making the correct selections. To do so requires using the instant claims as a template and that, of course, is improper.

The claimed dispersant has surprising and unexpected properties. It decreases the viscosity of a pigment dispersion when employed in a relatively small amount while lessening the relative interfacial tension drop (RIFTD). This is demonstrated in the application on pages 10-13. The comparative examples use dispersants which have a shorter R group. Table 1 shows that with respect to a Yellow 12 pigment, the invention had about the same viscosity as the comparative examples but the RIFTD ranged from 0.41 to 1.18 as opposed to the significantly higher 1.93. With respect to a Blue 15:3 pigment, the RIFTD was also significantly lower (0.18 vs. 0.73) and here the viscosity was greatly reduced (104 vs. 2816). There is nothing in the references which forecasts the improved viscosity and relative interfacial tension drop characteristics. Quite to the contrary, the record reinforces the surprising and unexpected nature of the invention in that the Johnson patent points out that in order to adjust viscosity, one needs to rely on selection of solvent. See column 11, line 21.

It is respectfully submitted that the shotgun nature of the references coupled with the surprising and unexpected results establish that the invention is patentable over this combination of references.

The considerations relative to the Johnson patent are similar but it reinforces the unexpected nature of the invention.

Johnson relates to modified pigments in which a pigment has an attached group of the formula $-X-(\text{nonionic group})_pR$ in which R represents hydrogen, an alkyl group or an aromatic group and p is an integer from 1 to 500, or $-X-[\text{polymer}]R$ in which the polymer contains about 1 to 500 repeating units. Where R is hydrogen and also where R can represent a polymer such as polyvinylchloride, polycaprolactam, polyester, polyether, polyamide, polymers containing sulfur, etc., none of which are hydrocarbons, the modified pigment of Johnson is clearly outside the scope of the rejected claims. The Examiner has asserted that it is possible to make selections which would result in a material falling within the scope of the claims here but has not identified (nor can applicant identify) anything which would motivate a skilled person to make selections leading to a material which is similar to the instant claims without using hindsight and the present claims as a template, neither of which is proper. For instance, no species falling within the scope of these claims has been identified.

There is also nothing in Johnson negating the surprising and unexpected results discussed above. As note above, Johnson reinforces the surprising and unexpected nature of the invention by pointing out that in order to adjust viscosity, one needs to rely on selection of solvent. See column 11, line 21.

It is respectfully submitted that the shotgun nature of this patent coupled with the surprising and unexpected results establish that the invention is patentable over Johnson.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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